

STARMACH, Karol, prof., dr.; ROSOL, Edward

Morphometric characteristics of barbels *Barbus petenyl* Heckel from the waters of Upper Vistula. *Acta hydrobiol* 3 no.4:217-224 '61.

1. Zaklad Biologii Wod, Polska Akademia Nauk, Krakow, ul. Slawkowska 17.

(Poland—Barbel(Fish))

ROSOL, Miroslav; ANTOS, Jaroslav

Detection of atypical conditions of the cervical epithelium with the aid of a simple cytodiagnostic method. Sborn. ved. prac. lek. fak. Karlov. univ. (Hrad Kral) 4 no. 5:599-604 '61.

1. Gynekologicko-porodnicka klinika; prednosta prof. DrSc. MUDr. J. Pazourek.

(CERVIX NEOPLASMS)

ROSOL, M.; ANTOS, J.

Gynecological cytodiagnosis with the aid of Czechoslovakian inks.  
Cas. Lek. Cesk. 101 no.5:138-142 2 F '62.

1. Gynekologicko-perodnicka klinika LFKU v Hradci Kralove, prednosta  
prof. DrSc. MUDr. Josef Pazourek.

(CYTODIAGNOSIS) (INK)

ROSOL, M.

Cytological detection of atypical epithelium of the cervix  
uteri in menopause. Cesk. gynek. 30 no.8:568-571 0 '65.

1. Gyn.-por. klin. lekarske fakulty Karlove University v  
Hradci Kralove (prednosta prof. dr. K. Vacha, DrSc.).  
Submitted April 10, 1965.

COUNTRY : POLAND  
SUBJECT : Chemical Technology. Chemical Products and Their Applications. Production and Separation of Gases.  
INFO. SUR. : RZhKhim., No 19, 1959, No. 62853  
AUTHOR : Sokol, T.  
INSTRUMENT : -  
TITLE : Manufacture of Oxygen and Its Utilization  
INFO. SUR. : Izv. Akad. Nauk SSSR, 1958, 37, No 9, 502-507  
ABSTRACT : Described is the scheme of the Linde-Frenkel process for the manufacture of technical oxygen (O<sub>2</sub>) and basic fields of its application are indicated. Presented are certain data pertaining to the production in the U.S.A. covering Nations's, Elliot's and other processes.  
-- V. Sokol'skiy.

Card: 1/1

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KOSOL, I

27  
/ Manufacture of oxygen and its application. Tadeusz  
Rosol (Inst. Syntezy Chem. Chorzów, Poland). ~~Przemys~~  
~~Chem.~~ 37, 582-7(1958).—A review of manufg. methods by  
Linde, Linde-Frankl, Claude, Heylandt, and improved  
rectification method by Lachman is given. R. lists applica-  
tions of O in the chem., metallurgical, glass, and cement  
industries. Comparison of O manufg. costs by different  
methods is given. F. J. Hendel

Distr: 4E2d

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PENNO, Fryderyk, mgr inż.: ROSOL, Tadeusz, mgr inż.

The Chorzow Nitrogen Works as a cradle of new technology.  
Przegl techn 85 no.7:3,4 , 16 F'64.

STRIBRNA, J.; SCHUCK, O.; CHOLINSKY, K.; MARKOVA, Z.; ROSOL, Z.

The effect of polythiazide on the renal elimination of water and on osmotically active substances during water diuresis. Cas. lek. cesk. 104 no.30:809-812 23 J1 '65.

1. Vyzkumny ustav experimentalni terapie a interni katedra Ustavu pro doskolovani lekaru v Praze (reditel prof. dr. O. Smahel, DrSc.) a Ustav klinicke fyziologie lekarske fakulty hygienicke Karlovy University v Praze (reditel prof. dr. J. Skladal).

ROSOL, Z.

STOJAN, M.; ROSOL, Z.

Notes on the Recording of the Epicardial and Intramural Electrogram of the frog heart. *Physiol. bohém.* 6 no.2:240-245 1957.

1. Chair of Physiology of the Faculty of General Medicine, Charles University, Prague.

(ELECTROCARDIOGRAPHY

simple method for epicardial & intramural ECG of frog heart)

ROSOL, ZDENEK

17.5.5

1/2

[illegible]

STOJAN, M.; ROSOL, Z.

Registration of epicardiac and intramural electrogram in frog's heart. Cesk. fysiол. 6 no.2:208-212 1957.

1. Katedra fysiologie fakulty vseob. lek. KU, Praha.

(ELECTROCARDIOGRAPHY,

simultaneous registration of epicardiac & intramural potentials in frog. (Cz))

ROSOL, Zdenek

CZECHOSLOVAKIA

MD

OUNZ (Okresni Ustav Narodniho Zdravi - District Institute  
of National Health), Rakovník

Prague, Prakticky Lekar, No 18, 1962, pp 807-809

"VII Day of Interns in Prague"

ROSOL, 20

-HERLES, F.; ROSOL, Zd.

Electrocardiogram in non-specific myocarditis . Cas. lek. cesk. 96 no.51:  
1577-1582 20 Dec 57.

1. II. interni klinika fakulty vseobecneho lekarstvi KU v Praze, prednosta  
prof. Dr F. Herles.

(MYOCARDITIS, differ. diag.

non-specific myocarditis, ECG (Cz))

(ELECTROCARDIOGRAPHY, in various dis.

myocarditis, non-specific, value in differ. diag. (Cz))

RCSOL, 7.

Epicardiac and intramural electrocardiogram of a frog heart. p.208.  
(Ceskoslovenska Fysiologie, Vol. 6, No. 2, 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

CZECHOSLOVAKIA / Human and Animal Physiology (Normal and Pathological). Blood Circulation. Heart T

Abs Jour: Ref Zhur-Biologiya, No 21, 1958, 97521

Author : Herles, F., Rosol, Zd.

Inst : Not given

Title : Electrocardiogram in Nonspecific Myocarditis

Orig Pub: Casop. lekaru ceskych., 1957, 96, No 51, 1577-1582

Abstract: No abstract

Card 1/1

*ROSOL, Z.*  
KORBEIAR, J.; ROSOL, Z. (okresni internista, OUNZ, Praha-zapad)

Pulseless disease, or Takayashu syndrome. Cas. lek. cesk. 97 no.8:249-251 21 Feb 58.

1. II Interni klinika KU v Praze, prednosta prof. F. Herles.  
(AORTA, dis.  
aortic arch synd., case report (Cz))

ROSOL, Zdenek, MUDr

Case of mitral stenosis with atypical clinical and patho-anatomical findings. Cas.lek.cesk. 91 no.43:1233-1234 24 Oct 52.

1. Sekundarni lekar interniho odd. nemocnice v Ces. Brode.  
(MITRAL STENOSIS,  
atypical case)

ROSOL, Zdenek, MUDr.

Pyopericarditis in myocardial infarction. Prakt. lek., Praha  
35 no.17:390-391 5 Sept 55.

1. Interni odd. lu kove casti OUNZ Cesky Brod. primar dr.  
Josef Ledec.

(MYOCARDIAL INFARCT, complications,  
pyopericarditis)

(PERICARDITIS,  
pyopericarditis, in myocardial infarct.)

ROSOL, Zdenek, MUDr

Experiences with myocardial infarction with review of recent progress in the field of physiopathology. Prakt. lek., Praha 34 no.21:489-490 5 Nov 54.

1. Interni odd. OUNZ Cesky Brod.  
(MYOCARDIAL INFARCT, pathology,  
physiopathol.)

ROSOL, Zdenek, MUDr

Notes on etiology, pathogenesis and diagnosis of diabetes insipidus.  
Cas. lek. cesk. 93 no.47:1294-1297 19 Nov 54.

1. Interni oddeleni nemocnice OUNZ, Cesky Brod. Vedouci primar:  
MUDr Josef Ledec  
(DIABETES INSIPIDUS  
etiol., pathogen. & diag.)

LINKEVICH, M.A.; ROSOLOV, A.P.

Production conferences should be effective. Razved. i okh. nedr.  
28 no.7:52-54 J1 '62. (MIRA 15:8)

1. Severoural'skaya kompleksnaya geologorazvedochnaya ekspeditsiya.  
(Prospecting) (Works councils)

ROSLOVSKAYA, N. E.

U S S R .

✓ Conversion of the derivatives of cyclopentane on alumina-silica catalyst. K. V. Topchieva, E. N. Roslovskaya, B. G. Treshchova, S. S. Novikov, and S. I. Khromov. *Vestnik*

*Moskov. Univ.* 8, No. 12, *Fiz.-Mat. i Estestven. Nauk* No. 8, 97-100(1953).—Cyclopentane (I), methylcyclopentane (II), ethylcyclopentane (III), isopropylcyclopentane (IV), and butylcyclopentane (V) undergo thermal decomposition on tech. Al-silica catalyst (VI) at  $500 \pm 1^\circ$ . I and II undergo negligible changes. III yields II, toluene, isopentane, and some unknown hydrocarbons. IV gave derivs. of cyclohexane (66%). V gave a mixt. of mono- and trisubstituted derivs. of  $C_6H_8$  (80%), and also derivs. of cyclopentane. For each expt. 94 ml. of VI was used, and the hydrocarbons were introduced into the quartz tube at a vol. velocity of 0.5. VI is regenerated in air at  $500^\circ$ , and its activity standardized (cf. *Vestnik Moskov. Univ.* 3, No. 11, 133(1948)). M. D.

TOPCHIEVA, K.V.; ROSOLOVSKAYA, Ye.N.; SHARAYEV, O.K.

Effect of the degree of dehydration of aluminum oxide on its catalytic activity. Vest.Mosk.un.Ser.mat., mekh., astron., fiz., khim. 14 no.1:217-223 '59. (MIRA 13:8)

1. Kafedra fizicheskoy khimii Moskovskogo universiteta.  
(Aluminum oxide)

TOPCHIEVA, K.V.; ROSOLOVSKAYA, Ye.N.

Effect of the dehydration of an aluminosilicate catalyst on  
its acidity. Neftekhimiia 2 no.3:298-304 My-Je '62.  
(MIRA 15:8)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova,  
khimicheskii fakul'tet.

(Aluminosilicates) (Dehydration (Chemistry))  
(Hydrogen-ion concentration)

TOPCHYEVA, K.V.; ROSOLOVSKAYA, Ye.N.

Effect of the heat treatment of aluminosilicate catalysts in a vacuum of their structure. Neftekhimiya 2 no.2:175-178 M5-Ap '62.  
(MIRA 15:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova  
khimicheskoy fakul'tet.  
(Aluminosilicates)

TOPCHIEVA, K.V.; ROSOLOVSKAYA, Ye.N.; TRESHCHOVA, Ye.G.; NOVIKOV, S.S.;  
KHROMOV, S.I.

Transformations of cyclopentane homologs in aluminosilicate as  
catalytic agent. Vest.Mosk.un. 8 no.12:97-100 D '53. (MLRA 7:2)

1. Kafedra fizicheskoy khimii.

(Hydrocarbons)

KHOMYAKOV, Yu.S.; ROSOVSKAYA, Z.Ye.; BELAYA, Yu.A.

Some difficulties in the diagnosis of metastases of chorioepithelioma  
in the lungs. Akush. i gin. 36 no.3:28-30 My-Je '60.

(MIRA 13:12)

(LUNGS—CANCER)

ROSLOVSKIY, A.I.

Kinetics and mechanism of the decomposition of nitric oxide.  
Zhur.fiz.khim. 30 no.6:1349-1355 Je '56. (MLRA 9:10)

1. Akademiya nauk Az SSR, Institut fiziki i matematiki, Baku.  
(Nitrogen oxides)

ROSOLOVSKIY, V. Ye

USSR/Chemistry - Physical chemistry

Card 1/2 : Pub. 147 - 18/27

Authors : Komandim, A. V., and Rosolovskiy, V. Ya.

Title : Dipole moments of certain orthohydroxybenzoic acid and glycerin derivatives

Periodical : Zhur. fiz. khim. 28/12, 2215-2221, Dec 1954

Abstract : In order to explain the effect of the hydrogen bond on the dipole moment, the following compounds were measured at 25° C in benzene solutions: methyl and phenyl ethers of o-acetoxybenzoic acid (methyl and phenyl o-acetoxybenzoate), phenyl ether of o-phenoxybenzoic acid (phenyl o-phenoxybenzoate) and glycerin ether of acetic acid (glycerin acetate) as well as glycerin ether of salicylic acid (glycerin salicylate) in dioxane. The dipole moment of the latter was measured in dioxane because of its low solubility in benzene. The synthesis and purification of the investigated substances are described and the results obtained are tabulated. Fourteen references ; 2 USSR; 6 German; 1 British; 1 French; 3 USA and 1 Swiss (1897-1954). Tables.

Zhur. fiz. khim. 28/12, 2215-2221, Dec 1954

(Additional Card)

Card 2/2

Institution : The M. V. Lomonosov State University, Moscow

Submitted : May 8, 1954

ROSLOVSKIY, V. Ya.

Fusion diagram for the chloric anhydride-carbon tetrachloride system. A. A. Zinov'ev and V. Ya. Roslovskii. *Zhur. Neorg. Khim.* 1, 2596-600 (1958).—Pure  $\text{Cl}_2\text{O}_7$  was prepd. from concd.  $\text{HClO}_4$  and  $\text{P}_2\text{O}_5$  with subsequent distn. at  $-88$  to  $-84^\circ$  at 1 mm. Hg.  $\text{Cl}_2\text{O}_7$  has a m.p. of  $-90 \pm 2^\circ$  and undergoes a polymorphic transition at  $-100 \pm 2^\circ$ . The  $\text{Cl}_2\text{O}_7\text{-CCl}_4$  system is characterized by a simple eutectic with a m.p. of  $-94^\circ$  at a compn. of 90 mole %  $\text{Cl}_2\text{O}_7$ . Above  $-23^\circ$   $\text{Cl}_2\text{O}_7$  and  $\text{CCl}_4$  are completely miscible. J. Rovtar Leach

AUTHORS: Rosolovskiy, V.Ya., Zinovi'yev, A.A. 70-3-7-20/44

TITLE: Chloric Acid and its Derivatives (Khlornaya kislota i yeye proizvodnyye) VII. On the Polymorphisms of Oxonium Perchlorate (VII. O polimorfizme perkhlorata oksoniya)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 7, pp 1589-1591 (USSR)

ABSTRACT: In the present paper the results obtained by investigation of phase transformation in oxonium perchlorate are investigated. Experiments were carried out by thermal and dilatometric methods. For the determination of the temperature of phase transformation heating curves were plotted for the interval of from -30 to -10° C. In the case of more rapid cooling down the monohydrate of chloric acid ( $\text{HClO}_4 \cdot \text{H}_2\text{O}$ ) is formed, which is stable at -20° C. Beyond this temperature oxonium perchlorate is subjected to reversible phase transition. The transition process is accompanied by a change of volume and an increase of the density of the oxonium perchlorate. There are 1 figure and 10 references.

Card 1/2

Chloric Acid and its Derivatives.  
VII. On the Polymorphisms of Oxonium  
Perchlorate

78-3-7-20/44

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova,  
Akademii nauk SSSR (Institute of General and Inorganic Chemistry  
imeni N.S.Kurnakov, AS USSR)

1. Oxonium perchlorates--Phase studies
2. Oxonium perchlorates  
--temperature factors
3. Chloric acid derivatives--properties

Card 2/2

AUTHORS: Zinov'yev, A. A., Rosolovskiy, V. Ya. SOV/78-3-10-25/35

TITLE: X. The System Chlorine - Heptoxide - Water (X. Sistemy khlornyy anhidrid-voda)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 10, pp 2382-2389 (USSR)

ABSTRACT: An investigation was carried out of the fusion diagram of the system  $\text{Cl}_2\text{O}_7\text{-H}_2\text{O}$  in the range of from perchloric monohydrate to dichlorine heptoxide. The freezing-point curve of the mixtures of hydronium perchlorate and anhydrous perchloric acid was determined in a more precise way. The monohydrate of perchloric acid (hydronium perchlorate) was produced according to the following reaction:

$$\text{HClO}_4 + \text{HClO}_4 \cdot 2 \text{H}_2\text{O} = 2 \text{H}_3\text{O}^+ [\text{ClO}_4]^-$$

The melting point of hydronium perchlorate is at  $+49,9^\circ\text{C}$ . The apparatus shown in figure 1 was used for the production of  $\text{Cl}_2\text{O}_7$ .  $\text{Cl}_2\text{O}_7$  with a purity of 99,96% was obtained by this analysis. The behavior in the melting process was examined by visual and thermographic methods. The behavior of the melt in the

Card 1/3

SOV/78-3-10-25/35

X. The System Chlorine - Heptoxide - Water

system  $\text{Cl}_2\text{O}_7\text{-H}_2\text{O}$  shows in the concentration range 100-25 mol-%  $\text{Cl}_2\text{O}_7$  that the crystallization curve of perchloric acid falls in the fusion diagram. The melting point of anhydrous chloric acid mentioned in the references was refuted. Chloric acid does not have its melting point at  $-112^\circ\text{C}$ , but at  $-100^\circ\text{C}$ . It was found out by the dilatometric method that the polymorphous transformation of hydronium perchlorate takes place at  $-24,9^\circ\text{C}$ . The density of the modification of hydronium perchlorate which is stable below the transformation point, is  $d_4^{-25} = 2,040$ , and the density of the modification which is stable above the transformation point, is  $d_4^{-25} = 2,025$ . When pure perchloric acid is cooled, crystallization begins at  $-47^\circ\text{C}$  and ends at  $-100^\circ\text{C}$ . The solid phase thus crystallizing out consists of hydronium perchlorate, as confirmed by analysis. According to visual observations, a mixture of  $\text{Cl}_2\text{O}_7 + \text{HClO}_4$  becomes turbid at  $-50^\circ\text{C}$  when it is cooled. The absence of pure perchloric acid in the fusion diagram was discussed. A new improved method of producing  $\text{Cl}_2\text{O}_7$  was suggested.

Card 2/3

SOV/78-3-10-25/35

X. The System Chlorine Heptoxide - Water

There are 6 figures, 2 tables, and 23 references, 6 of which are Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova  
Akademii nauk SSSR (Institute of General and Inorganic Chemistry  
imeni N. S. Kurnakov of the Academy of Sciences USSR)

SUBMITTED: January 3, 1958

Card 3/3

AUTHORS: Akishin, P.A., Vilkov, L.V. and Rosolovskiy, V.Ya. SOV/70-4-3-11/32

TITLE: Investigation of the Structures of Molecules of Perchloric Acid and Perchloric Anhydride

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 3, pp 353-359 (USSR)

ABSTRACT:  $\text{HClO}_4$  was made by distilling  $\text{HClO}_4 \cdot 2\text{H}_2\text{O}$  in vacuo with oleum.  $\text{Cl}_2\text{O}_7$  was made by reacting  $\text{HClO}_4$  with  $\text{P}_2\text{O}_5$  and distilling at  $-34^\circ$  and 2 mm Hg. Electronograms were taken as described earlier (A.V. Frost et al. - Ref 5) and interpreted in two ways: a) by transformation to radial density distributions and b) by trial and error involving comparison of observed and calculated scattering curves. Calculations were made on the Strela machine. For  $\text{HClO}_4$  28 electronograms were taken for  $\lambda = 0.052 - 0.062 \text{ \AA}$ . Intensity curves showed 10 peaks and led to final molecular dimensions of: (Cl = O)  $1.42 \pm 0.01 \text{ \AA}$ ; (Cl - O)  $1.64 \pm 0.02 \text{ \AA}$  and (O-Cl-O)  $100^\circ \pm 2^\circ$ . H-positions were not found. There

Card1/3

SOV/70-4-3-11/32

Investigation of the Structures of Molecules of Perchloric Acid and Perchloric Anhydride

are three  $\text{Cl} = \text{O}$  bonds and one  $\text{Cl} - \text{O}$  in the  $\text{HClO}_4$  molecule which has the symmetry  $\text{C}_{3v}$ .

For  $\text{Cl}_2\text{O}_7$  a series of 32 electronograms showed 8 peaks.

The molecule  $\text{O}_3\text{Cl}-\text{O}'-\text{ClO}_3$  was found to have the following dimensions: ( $\text{Cl} = \text{O}$ ) (in the  $\text{ClO}_3$  groups)  $+ 424 \pm 0.01 \text{ \AA}$ ; ( $\text{Cl} - \text{O}'$ )  $1.725 \pm 0.05 \text{ \AA}$ ;  $\angle(\text{ClO}'\text{Cl}) 115^\circ \pm 5^\circ$ ;  $\angle(\text{O ClO}') 97^\circ \pm 3^\circ$ . The molecule appears to have only one plane of symmetry (containing the two Cl atoms and the middle  $\text{O}'$  atom) with the  $\text{ClO}_3$  groups in opposite orientations. It is significant that these two molecules each have two different Cl-O bond distances whereas the  $\text{ClO}_4^-$  ion is tetrahedral. In  $\text{HClO}_4$  and  $\text{Cl}_2\text{O}_7$  the height of the  $\text{ClO}_3$  pyramid ( $\sim 0.2 \text{ \AA}$ ) is near to the normal oscillation amplitude along the Cl-O bond and hence the

Card2/3

SOV/70-4-3-11/32  
Investigation of the Structures of Molecules of Perchloric Acid and  
Perchloric Anhydride

molecules can easily dissociate to form active complexes.  
Acknowledgments are made to V.I. Mikheyeva and  
A.A. Zinov'yev. There are 5 figures, 4 tables and  
14 references, of which 6 are Soviet, 5 German, 1 English  
and 2 Scandinavian.

ASSOCIATIONS: Moskovskiy gosudarstvennyy universitet im.  
M.V. Lomonosova (Moscow State University imeni M.V.Lomonosov)  
Institut obshchey i neorganicheskoy khimi (Institute  
of General and Inorganic Chemistry)

SUBMITTED: February 10, 1959

Card 3/3

5(4)

SOV/76-33-6-18/44

AUTHORS: Komandin, A. V., Rosolovskiy, V. Ya.

TITLE: Densities and Molar Volumes of Some Organic Compounds in Broad Temperature Ranges (Plotnosti i molyarnyye ob'yemy nekotorykh organicheskikh soyedineniy v shirokom intervale temperatur)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 6, pp 1280-1282 (USSR)

ABSTRACT: The densities were determined in the temperature range of 60 - 160° for the liquid and undercooled state of the following 6 compounds: ethylene glycol, glycerin,  $\alpha$ , $\gamma$ -glyceryl acetate,  $\alpha$ -glycerin-o-hydrobenzoate, and the methyl- and phenyl-o-acetoxy benzoate (Table 1). The determination accuracy is specified as being  $\pm 0.03\%$ . Results show that in all compounds in the investigated temperature range the temperature function of density proceeds linearly. Also the molar volumes exhibit a linear temperature function. Table 2 supplies equations of the straight lines of the temperature function of density and molar volumes of the compounds investigated for broad temperature ranges. There are 2 tables

Card 1/2

SOV/76..33-6..18/44

Densities and Molar Volumes of Some Organic Compounds in Broad Temperature Ranges

and 3 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: November 10, 1957

Card 2/2

5(4)

SOV/76.33-6-19/44

AUTHORS: Komandin, A. V., Rosolovskiy, V. Ya.

TITLE: Dielectric Constant of Some Organic Compounds Over a Broad Range of Temperature (Dielektricheskaya pronitsayemost' nekotorykh organicheskikh soyedineniy v shirokom intervale temperatur)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 6, pp 1283-1288 (USSR)

ABSTRACT: To clarify the relationship existing between dielectric properties and structure the dielectric constants (DC) were determined for the liquid and undercooled state over a broad temperature range concerning the following substances: methyl- and phenyl-o-acetoxybenzoate,  $\alpha$ -glyceryl-o-hydroxybenzoate and  $\alpha,\gamma$ -glyceryl acetate. The preparation and cleaning methods as well as the physical constants of these compounds have already been described earlier (Ref 2). The determination of the (DC) took place according to the pulsating method (Ref 3). Measuring results of the (DC) and densities of the above mentioned substances are given as well as the computed values of the general and orientation polarization for the liquid and undercooled phase, and the

Card 1/2

SOV/76-33-6-19/44

Dielectric Constant of Some Organic Compounds Over a Broad Range of Temperature

coefficients  $g$  according to Kirkwood (Tables 1 .. 4). It may be observed from the results obtained and from a graph (Figure) that the  $(DC)$  rises with the temperature drop, attains a maximum and then drops rapidly. The position of the curve maxima, however, depends on the structure of the compound. With rising molecular weight of ester the  $\epsilon - T$  curve ( $\epsilon = (DC)$ ,  $T = \text{temperature}$ ) runs lower, and the curve maximum shifts to higher temperatures. The temperatures  $T_x$  (characteristic of each of the compounds) which corresponded to the  $\epsilon - T$  curve inflection, were determined at constant frequencies of an electric outer field, and are specified in the present paper. There are 1 figure, 4 tables, and 4 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: November 10, 1957

Card 2/2

ROSOLOVSKIY, V. Ya. Cand Chem Sci -- (diss) "Physicochemical research on perchloric acid and perchloric anhydride." Moscow, 1960, 13 pp , (Moscow Order of Lenin and Order of Labor Red Banner State Univ im M. V. Lomonosov. Faculty of Chemistry.), 120 copies, (KL, 30-60, 136)

AKISHIN, P.A.; VILKOV, L.V.; ROSOLOVSKIY, V.Ya.

Electron diffraction study of the structure of vapor molecules of  
nitric acid and nitric anhydride. Zhur. strukt. khim. 1 no.1:5-11  
Je '60. (MIRA 13: 8)

1. Moskovskiy gosudarstvennyy universitet imeni m.V.Lomonosova i  
Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova AN  
SSSR.

(Nitric acid)

(Nitrogen oxide)

ROSOLOVSKIY, V. Ya.; ZINOV'YEV, A.A.; PROKHOROV, V.A.

Density in the system chloric anhydride - water. Zhur. neorg. khim. 5  
no.3:692-694 Mr '60. (MIRA 14:6)

1. Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova  
AN SSSR.

(Chlorine oxide)

KRIVTSOV, N.V., ROSOLOVSKIY, V.Ya., ZINOV'YEV, A.A.

Integral heats of solution of perchloric acid. Zhur. neorg. khim.  
5 no.4:772-774 Ap '60. (MIRA 13:7)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova  
Akademii nauk SSSR.  
(Perchloric acid) (Heat of solution)

ROSOLOVSKIY, V. Ya.; KRIVTSOV, N.V., ZINOV'YEV, A.A.

Integral heats of solution of perchloric anhydride and of its mixtures with perchloric acid in water at 25°. Zhur. neorg. khim. 5 no.4:778-781 Ap '60. (MIRA 13:7)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova Akademii nauk SSSR.

(Chlorine oxide) (Perchloric acid)  
(Heat of solution)

5.2400 aln 2209

84252  
S/078/60/005/010/002/021  
B004/B067

AUTHORS: Rosolovskiy, V. Ya., Zinov'yev, A. A., Prokhorov, V. A.

TITLE: Production of Perchloric Anhydride ✓

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 10, pp. 2148-2152

TEXT: The authors discuss the hitherto known methods of producing  $Cl_2O_7$  by reacting  $HClO_4$  with  $P_2O_5$ . Since  $Cl_2O_7$  was distilled off at 40 - 80°C, it always contained  $Cl_2O_6$  and  $ClO_2$  impurities. The methods published earlier by the authors are briefly mentioned: reaction of liquid  $HClO_4$  with solid  $P_2O_5$  and distilling off  $Cl_2O_7$  at -30°C and 2 torr (Ref. 7), and reaction of vaporous  $HClO_4$  with solid  $P_2O_5$  (Ref. 8). The present paper reports on a new method in which  $SO_3$  is used for dehydration. When adding oleum to  $HClO_4$  and cooling with dry ice, the liquid is separated into two layers at a certain concentration ratio

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84212

Production of Perchloric Anhydride

S/078/60/005/010/002/021  
B004/B067

(Tables 1,2). The upper one contains almost pure  $\text{Cl}_2\text{O}_7$  from which the low  $\text{SO}_3$  amount (0.5%) is removed by distillation at 2 torr over  $\text{P}_2\text{O}_5$  in a collecting vessel cooled with dry ice (Fig.). The lower liquid layer contains  $\text{H}_2\text{SO}_4$ ,  $\text{SO}_3$ ,  $\text{HClO}_4$ ,  $\text{Cl}_2\text{O}_7$ , and crystals of either pyrosulfuric acid or of the compound  $(\text{ClO}_3)(\text{HS}_2\text{O}_7)$ , which was discovered by A. A. Spryskov (Ref. 9). No pure  $\text{Cl}_2\text{O}_7$  could be distilled off from this mixture. To avoid explosions one must work cautiously. The upper layer must be poured off since the friction of the tap of a separating funnel may already cause explosion. The following summational reaction equation is given:  $2\text{HClO}_4 \cdot 2\text{H}_2\text{O} + 5\text{SO}_3 = \text{Cl}_2\text{O}_7 + 5\text{H}_2\text{SO}_4$  (4). There are 1 figure, 2 tables, and 9 references: 3 Soviet, 3 US, 1 British, and 2 German.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR, Laboratoriya neorganicheskogo sinteza (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences USSR, Laboratory of Inorganic Synthesis)

Card 2/3

ZINOV'YEV, A.A.; ROSOLOVSKIY, V.Ya.

Viscosity in the system perchloric anhydride - water. Zhur. neorg.  
khim. 5 no.11:2564-2567 N '60. (MIRA 13:11)  
(Chlorine oxide) (Viscosity)

ROSOLOVSKIY, V.Ya.

Dry box. Zav. lab. 27 no. 3:353-354 '61.

(MIRA 14:3)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova  
Adademii nauk SSSR.

(Chemical apparatus)

110234

S/020/62/146/001/011/016  
B101/B144

11.9.40  
AUTHOR: Rosolovskiy, V. Ya.

TITLE: Thermal decomposition of nitrosyl perchlorate

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 1, 1962, 115 - 117

TEXT: The gaseous products condensed by liquid nitrogen were analyzed, as well as the composition of the solid phase in thermal decomposition of nitrosyl perchlorate at  $99 \pm 0.1^\circ\text{C}$  and 1 mm Hg vacuum. The analysis of the solid phase indicates the formation of nitronium perchlorate. The infrared spectrum showed both the  $2293\text{ cm}^{-1}$  band of the  $\text{NO}^+$  ion and the  $1385\text{ cm}^{-1}$  band of the  $\text{NO}_2^+$  ion.  $\text{ClO}_2$  and  $\text{NO}_2$  form as gaseous products. The free chlorine content of the gas is due to thermal decomposition of  $\text{ClO}_2$ . The maximum  $\text{NO}_2\text{ClO}_4$  concentration, occurring after about 200 min, suggests that the nitrosyl perchlorate decomposes in two consecutive reactions:  $2\text{NOClO}_4 = \text{NO}_2\text{ClO}_4 + \text{NO}_2 + \text{ClO}_2$  (1);  $\text{NO}_2\text{ClO}_4 = \text{NO}_2 + \text{ClO}_2 + \text{O}_2$  (2). Since the  $\text{NO}_2\text{ClO}_4 : \text{NOClO}_4$  ratio in the solid phase meanwhile  
Card 1/2

Thermal decomposition of...

S/020/62/146/001/011/016  
B101/B144

increases, (1) proceeds faster than (2). The thermogram of nitrosyl perchlorate decomposing at increasing temperature showed two endothermic effects, at 100-125°C corresponding to (1) and at 165-180°C from (2). There are 2 figures. The most important English-language reference is: M. M. Markowitz, J. E. Ricci et al., J. Am. Chem. Soc., 79, 3659 (1957).

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences USSR)

PRESENTED: May 5, 1962, by I. I. Chernyayev, Academician

SUBMITTED: April 24, 1962

Card 2/2

L 36696-65 EWT(m)/EPF(c)/EPF(n)-2/EPR/EWP(j)/T/EWP(t)/EWP(b)/EWA(c) Pc-l/  
Pr-l/PS-l/Pu-l TJP(c)/RPL JD/WW/JW/JG/JWD/RM

ACCESSION NR: AP5005011

S/0078/65/010/002/0446/0450

AUTHOR: Titova, K. V. ; Rosolovskiy, V. Ya.

TITLE: Certain physical-chemical properties of guanidinium perchlorate

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 2, 1965, 446-450

TOPIC TAGS: guanidinium perchlorate, crystal structure, solubility, thermal stability, polymorphic transition

ABSTRACT: The physical-chemical properties of guanidinium perchlorate (I) were studied. I belongs to the cubic system, the lattice parameter  $a = 5.32 + 0.05$  kKh. I does not form hydrates. Its solubility in water increases with temperature; it is soluble in polar organic solvents and insoluble in the non-polar solvents. Thermographic studies established a polymorphic transition at 181C. I melts at  $248 \pm 2$ C; slow decomposition starts at 300C and intensive exothermic decomposition occurs at 392C. The properties of I compare with those of the perchlorates of ammonium and alkali metals. Orig. art. has: 5 tables, 3 figures

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L 36696-65

ACCESSION NR: AP5005011

and 2 equations

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova  
Akademii nauk SSSR Laboratoriya okisliteley (Institute of General and Inorganic  
Chemistry Academy of Sciences Laboratory of Oxidizing Agents)

SUBMITTED: 29Feb64

ENCL: 00

SUB CODE: GC, IC

NR REF SOV: 002

OTHER: 007

Cord 2/2

L 36695-65 EWT(m)/EPF(c)/EPF(n)-2/EPR/ENP(j)/T/ENP(s)/ENP(u)/ENR(o) Pu-l/Pr-l/PS-l  
Pu-l IJP(c)/RPL JD/WW/JW/JWD/RM

ACCESSION NR: AP5005012 S/0078/85/010/002/0451/0453

AUTHOR: Titova, K. V. ; Rosolovskiy, V. Ya.

TITLE: The guanidinium perchlorate-lithium perchlorate system

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 2, 1965, 451-453

TOPIC TAGS: guanidinium perchlorate containing system, lithium perchlorate containing system, phase diagram, crystallization, hygroscopicity, guanidinium perchlorate

ABSTRACT: The fusion diagram for the binary system guanidinium perchlorate-lithium perchlorate was constructed (fig. 1). The crystallization curve consisted of three sections, corresponding to the crystallization of the high temperature modification of guanidinium perchlorate, to the low temperature modification of guanidinium perchlorate, and of lithium perchlorate. The eutectic at 105C corresponded to 50.5 mol%  $\text{CN}_3\text{H}_5\text{HClO}_4$  + 49.5%  $\text{LiClO}_4$ . Polymorphic transition of guanidinium perchlorate occurred at 181C. No binary compounds were detected in the system. Although guanidinium perchlorate is not hygroscopic, the

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L 36695-65

ACCESSION NR: AP5005012

hygroscopicity of the guanidinium perchlorate-lithium perchlorate melts approached that of lithium perchlorate. Orig. art. has: 4 figures and 2 tables

ASSOCIATION: None

SUBMITTED: 29 Feb 64

ENCL: 01

SUB CODE: GC, IC

NR REF SOV: 007

OTHER: 003

Card 2/3

ACC NR: AP7002819

SOURCE CODE: UR/0078/66/011/012/2819/2820

AUTHOR: Rosolovskiy, V. Ya.; Titova, K. V.

ORG: Oxidizer Laboratory, Institute of General and Inorganic Chemistry  
im. N. S. Kurnakov, Academy of Sciences (Institut obshchey i neorgan-  
icheskoy khimii Akademii nauk, Laboratoriya okisliteley)

TITLE: Nitroguanidinium perchlorate

SOURCE: Zhurnal neorganicheskoy khimii, v. 11, no. 12, 1966, 2819-2820

TOPIC TAGS: nitroguanidinium perchlorate, chemical synthesis, ~~nitro-~~  
~~guanidinium perchlorate property~~ GUANIDINE, PERCHLORATE,  
PERCHLORIC ACID

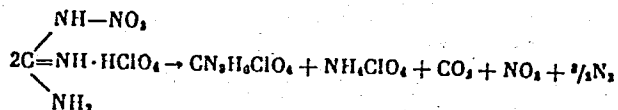
ABSTRACT: Nitroguanidinium perchlorate (NGPC) was prepared by dissolv-  
ing to saturation nitroguanidine in warm 72% perchloric acid. Cooling  
of the solution yielded colorless hygroscopic NGPC crystals. NGPC has  
a density of  $1.93 \pm 0.05$  g/cm<sup>3</sup>, is stable at room temperature in dry air,  
is soluble in polar organic solvents, and is hydrolyzed by water,  
methyl- or ethyl alcohol, and dioxan. The interplanar spacings and  
relative line intensities of x-ray patterns of NGPC powder are given  
in the table. The heating curve of NGPC recorded at a heating rate of  
3 deg/min, exhibits an endothermic effect at 75-80C, probably due to  
the polymorphic transformation of NGPC, and an exothermic effect at

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UDC: 547.495.9'117.3'113.7.04

ACC NR: AP7002819

120C due to simultaneous melting and decomposition of the substance.



Anhydrous perchloric acid dissolves 48.1% of NGPC at 25C. The solid phase in equilibrium with the saturated solution is an addition product of one molecule of perchloric acid to NGPC. This addition product is, probably, "nitroguanidinium diperchlorate." It can be isolated in the form of colorless hygroscopic crystals which are stable at room temperature, but which decompose in vacuum to form perchloric acid and NGPC. The substance melts incongruently on heating to 70C in a closed vessel. Orig. art. has: 1 table.

[W. A. 77]

[B0]

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ACC NR: AP7002819

Interplanar distances and relative line intensities for nitroguanidinium perchlorate

Line no.	Irel	d, kX	Line no.	Irel	d, kX	Line no.	Irel	d, kX
1	10	4.60	5	5	3.45	10	2	3.84
2	4	4.07	6	6	3.16	11	4	2.34
3	6	3.82	7	5	3.07	12	6	2.24
4	5	3.58	8	4	2.89	13	5	1.90
			9	1	2.69	14	2	1.67

SUB CODE: 21, 07/ SUBM DATE: 07Jul65/ ORIG REF: 001

Card 3/3

TITOVA, K.V.; ROSOLOVSKIY, V.Ya.

Some physicochemical properties of guanidinium perchlorate.  
Zhur. neorg. khim. 10 no.2:446-450 F '65. (MIRA 18:11)

Institut obshchey i neorganicheskoy khimii imeni Kurnakova  
AN SSSR, laboratoriya okisliteley. Submitted Febr. 29, 1964.

TITOVA, K.V.; ROSOLOVSKIY, V.Ya.

System guanidinium perchlorate-lithium perchlorate. Zhur. neorg.  
khim. 10 no.2:451-453 F '65. (MIRA 18:11)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova  
AN SSSR, laboratoriya okisliteley. Submitted Febr. 29, 1964.

KRIVTSOV, N.V., TITOVA, E.V., ROSOLOVSKIY, V.Ya.

Enthalpy of the formation of guanidinium perchlorate, nitrate,  
and sulfate. Zhur. neorg. khim. 10 no.2:454-457 F '65.  
(MIRA 18:11)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova  
AN SSSR, laboratoriya oksaliteley. Submitted Febr. 29, 1964.

L 10396-63 EPF(c)/EWT(m)/BDS--AFFTC/RPL--Pr-1--BN/WW/JW/JWD/H  
ACCESSION NR: AP3001213 S/0078/63/008/006/1326/1331

AUTHOR: Rosolovskiy, V. Ya.; Rumyantsev, Ye. S.

TITLE: Thermal decomposition of nitrosyl perchlorate||

SOURCE: Zhurnal neorganicheskoy khimii, v. 8, no. 6, 1963, 1326-1331

TOPIC TAGS: nitrosyl perchlorate thermal decomposition, decomposition mechanism, intermediate products of decomposition, NO sub 2 ClO sub 4 decomposition

ABSTRACT: The thermal decomposition of nitrosyl perchlorate (I) has been studied. The solid intermediate products of this decomposition were isolated for the first time, their composition determined, and the identity of gaseous end products verified. On the basis of a kinetic analysis carried out at 1 mm Hg and 99C, it was found that I decomposed in two stages, with NO sub 2 ClO sub 4 (II) forming rapidly in the first stage and slowly decomposing in the second stage. The mechanism proposed for the decomposition is shown in formula (1) of Enclosure. The isolated gaseous products trapped

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L 10396-63

ACCESSION NR: AP3001213

in the cold traps and the residual and condensed solid materials were analyzed chemically. Results indicated a content of II in the residual solid of up to 90%. The condensed-solid material consisted of mixtures of I and II, with the proportion of II noticeably lower than in the residual-solid material. The thermogram indicated two endothermic effects, corresponding to the rapid decomposition of I at 100--125C and the slow decomposition of II at 165--180C and confirming the decomposition mechanism proposed by the authors. It is noted that a study by Cruse, Huck, and Moller (Z. anorg. Chem., 259, 173 [1949]) of the decomposition of I in a closed system revealed two stages of pressure increase, but did not attribute this phenomenon to the two-stage decomposition reaction. Orig. art. has: 3 tables, 3 figures, and 3 formulas.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR. Laboratoriya okisliteley (Institute of General and Inorganic Chemistry, Academy of Sciences SSSR, Oxidizer Laboratory)

SUBMITTED: 24May62 DATE ACQ: 01Jul63

ENCL: 01

SUB CODE: 00

NO REF SOV: 002

OTHER: 007

Card 2/3

L 10656-63

EPF(c)/EWT(m)/EWP(q)/BDS--AFFTC/ASD--Pr-4--BW/WW/JW/JWD/H

ACCESSION NR: AP3001214

S/0078/63/008/006/1332/1337

AUTHOR: Rosolovskiy, V. Ya.; Rumyantsev, Ye. S.; Mal'tseva, N. N.

TITLE: Reaction of nitrosyl perchlorate with cadmium and zinc oxides

SOURCE: Zhurnal neorganicheskoy khimii, v. 8, no. 6, 1963, 1332-1337

TOPIC TAGS: nitrosyl perchlorate, cadmium, zinc oxides, anhydrous perchlorates, zinc perchlorate

ABSTRACT: The reaction of nitrosyl perchlorate (A) with CdO and ZnO in absence of solvent was investigated. (A) reacts with CdO in solid phase at about 100 degrees, under vacuum, with simultaneous decomposition of a part of the (A). The solid reaction products are a mixture of anhydrous Cd(ClO sub 4), NO sub 2 ClO sub 4 and unreacted CdO. Cd(ClO sub 4) sub 2 is not too stable thermally, but was obtained in 59% yield by heating reactants for 3 hours to a maximum of 300 degrees. Products were identified by IR. ZnO will react with (A) at 60-110 degrees; heating the reaction mixture under vacuum at 180-190 degrees produced 99% Zn(ClO sub 4) sub 2 with traces of ZnO and NO sub 2 ClO sub 4. This method is proposed for production of anhydrous metallic perchlorates. "The authors express deep appreciation to V. I. Mikheyev for constant attention to present work." Orig. art. has: 3

Card 1/2 *Instit. of Gen. & Inorganic Chem. Acad. of Sciences, U.S.S.R.*

RJSOLOVSKIY, V.Ya.

Thermal decomposition of nitrosyl perchlorate. Dokl. AN SSSR  
146 no.1:115-117 S '62. (MIRA 15:9)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova  
AN SSSR. Predstavleno akademikom I.I. Chernyayevym.  
(Nitrosyl compounds)

POLAND

KENCZA, Wiktor, and RODOLCINSKI, Szczepan, of the Department of Inorganic Chemistry, University (Katedra Chemii Nieorganicznej, Uniwersytet, Warszawa), in Warsaw.

"Polarographic Studies of Dilute Aqueous Solutions of Molybdophosphoric Heteropolyacids."

Warsaw, Revue de Chimie, Vol 37, No 2, 1968, pp911-917.

Abstract: [English article, authors' English summary notified] Data on the reduction of molybdophosphoric acids on the mercury dropping electrode are scarce. Therefore the authors thought it would be useful to make a detailed study of the polarographic properties of these compounds. Heteropolyacids formed in acid solution during reaction between ammonium molybdate and sodium phosphate were investigated. Conditions are given at which a well developed reduction wave was observed. The character of the limiting current was determined. Six curves and three graphs are reproduced. Thirty five references, including 2 Polish, 1 Russian, 1 Japanese, 6 German, 1 Indian, and 24 Western.

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- 6 -

KEMULA, Wiktor; ROSOLOWSKI, Szczesny

Polarographic determination of silicon as  $\gamma$ -molybdosilic acid.  
Chem anal 7 no.5:915-924 '62.

1. Department of Inorganic Chemistry, University, Warsaw.

KEMULA, Wiktor; ROSOLOWSKI, Szczesny

Polarographic properties of aqueous solutions of molybdosilicic acids. Roczniki chemii 36 no.1:179-181 '62.

1. Department of Inorganic Chemistry, University, Warsaw.

ROSOLANSKI, S.

Examples and conclusions; the matter of military ruffianism.

P. 1 (WOJNIEZ POLSKI) (Warszawa, Poland) No.  $\frac{1}{2}$  Jan. 1958

SO: Monthly Index of East European Accessions (EEAI) LC Vol. 7, No. 5. 1958

KEMULA, Wiktor; ROSOLOWSKI, Szczesny

Absorptiometric investigations of germanomolybdic acid. Roczniki chemii  
34 no.3/4:835-842 '60. (EEAI 10:3)

1. Katedra Chemii Nieorganicznej Uniwersytetu, Warszawa.  
(Absorptiometer) (Germanium) (Molybdic acids)

ROSOLOWSKI, SZCZESNY

4  
JAU(RM)(MA)

✓ Absorptionmetric investigations of germanomolybdic acid.  
Wiktor Kemula and Szczesny Rosolowski (Univ. War-  
saw). *Roczniki Chem.* 34, 835-42 (1960). In dil. aq. solns.  
of germanomolybdic acid (I) only 1 form exists with a ratio  
Ge:Mo = 1:12 over a wide range of pH values, e.g. in  
H<sub>2</sub>SO<sub>4</sub> at pH 0.8-3.6, in HNO<sub>3</sub> at 1.0-3.4, and in HClO<sub>4</sub> at  
0.9-3.6. The instability const. of I is equal to  $1.38 \times 10^{-12}$ .  
Thus, I is the most stable of all the colored heteropolycids  
of Mo. Its calcd. coordination no. is 4 and the correspond-  
ing formula is  $H_4[Ge(Mo_3O_{10})_4] \cdot nH_2O$ . A. Kreglewski

MW

KEMULA, Wiktor; ROSOLOWSKI, Szczesny

Photometric determination of silicon as  $\gamma$ -molybdosilic acid.  
Chem anal 5 no.3:419-428 '60. (EEAI 10:8)

1. Katedra Chemii Nieorganicznej Uniwersytetu, Warszawa.  
(Photometry) (Silicon) (Silicomolybdic acid)

Rosolowski, Szczesny

27

4

Conditions of formation of phosphomolybdic acids in solutions. Wiktor Kemula and Szczesny Rosolowski (Univ. Warsaw). Roczniki Chem. 32, 419-20 (1958) (English summary).—Optical methods have proved the existence of phosphomolybdic acids (I) of varying compn. dependent on the acidity of soln. At 20° and pH 0.7-1.1, 1.2-1.5, and 1.6-1.8 the molar ratios of P to Mo in the polyacids were 1:24, 1:20, and 1:16, resp., with the instability consts. 2.3, 3.9, and  $5.2 \times 10^{-11}$ , resp. At pH > 2 there exists the known complex with the molar ratio 1:12. These ratios are very sensitive to temp. changes. At 80° there exists I with the ratio 1:12 independent of the pH of soln. A. K.

72

POLAND / Inorganic Chemistry. Complex Compounds.

C-1

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 709.

Author : Kemula, W.; Rosolowski, S.

Inst : Not given.

Title : Conditions for the Formation of Phosphoromolybdic Acids in Solutions.

Orig Pub: Roczn. chem., 1958, 32, No 2, 419-420.

Abstract: The existence of phosphoromolybdic acids was determined by optical methods at various compositions, depending on the acidity of the solution. At a pH of 0.7 to 1.1 heteropolyacid is present in a molecular ratio (R)  $P:M_o$ , of 1:24. The constant of instability (C) of this complex is  $2.3 \times 10^{-10}$ . At a pH of 1.2-1.5  $r = 1:20$  and  $C = 3.9 \times 10^{-11}$ ; at a pH of 1.6-1.8  $r = 1:16$  and  $C = 5.2 \times 10^{-11}$ ; at a

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KEMULA, Wiktor; ROSOLOWSKI, Szczesny

Polarographic properties of aqueous solutions of molyb-  
dosilicic acids. Roczniki chemii 36 no.10:1417-1426 '62

1. Department of Inorganic Chemistry, University, Warsaw.

KEMULA, Wiktor, ROSOLOWSKI, Szczesny

Porafographic studies on dilute aqueous solutions of molybdo-phosphoric heteropolyacids. Roczniki chemii 37 no.9:941-947 '63.

1. Department of Inorganic Chemistry, University, Warsaw.

KEMULA, Wiktor; ROSOLOWSKI, Szczesny

Spectrophotometric studies on the formation of molybdosilic acids.  
Rocz chemii 34 no.1:3-15 '60. (EEAI 10:9)

1. Department of Inorganic Chemistry, University, Warsaw.

(Spectrophotometry) (Silicomolybdic acids)

9.5200

78165

SOV/103-21-3-11/21

AUTHORS: Ayzerman, M. A., Gusev, L. A., Rosonoer, L. I.,  
Smirnova, I. M., Tal', A. A. (Moscow)

TITLE: Finite Automats. II.

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol 21, Nr 3, pp 359-368 (USSR)

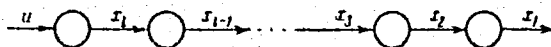
ABSTRACT: The paper is a continuation of the article published in "Avtomatika i telemekhanika," Vol 21, Nr 2. In Part II of this article the following problem is discussed: an automaton A', operating at a selected pace of time, T' is to be formed out of automats A, operating at a different pace of time T. In referring to Part I of the paper, it is shown that this may be obtained by two methods. According to the first method, *L* delay elements, operating at pace T, are connected in series as shown in Fig. 1,

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Finite Automatons. II.

78165

SOV/103-21-3-11/21



forming a delay line described by equations

$$x_1(p) = x_2(p-1),$$

$$x_2(p) = x_3(p-1),$$

$$\dots$$

$$x_l(p) = u(p-l).$$

The number  $\mathcal{L}$  is a positive integer. It is assumed that pace  $T$  is represented on the time axis by equal intervals  $\tau$  and pace  $T'$  by equal intervals  $\mathcal{L}\tau$ .

When an automaton is designed by the aggregation method in such a manner that the delay element with pace  $T$  is everywhere replaced by the above described lines, then the resulting automaton still operates at pace  $T$ . However, by registering the input and the delay line output symbols of this automaton after only  $\mathcal{L}\tau$  sec,

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Finite Automaton. II.

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SOV/103-21-3-11/21

the automaton with the desired pace may be obtained. The second method is applied to an automaton A, which at the moment  $t_0$  assumes an input state  $\rho_0$ , the latter remaining constant until  $t_1$ . During time  $t_0 \leq t \leq t_1$  the automaton operates as an autonomic automaton (see part I). At  $t = t_1$  the input state  $\rho_0$  changes to  $\rho_1$  and remains constant until  $t = t_2$ , thus defining a new autonomic automaton. At  $t = t_2$  the state  $\rho_1$  changes to  $\rho_2$ , etc. Under the assumption that the input state  $\rho$  and the states  $K(t)$  (see part I) are registered only at times  $t_0, t_1, t_2, \dots, t_i, \dots$ , an automaton A' is obtained and is based on the equilibrium states of autonomic automaton. The pace T' of A' is defined by  $t_0, t_2$ , etc., and does not depend on the pace of the automaton A. It is shown that the above two methods may be applied to neurons and to

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Finite Automata. II.

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SOV/103-21-3-11/21

relay-contact systems. By neuron is meant an element with a finite number of inputs and one output only. The input and output states are designated by symbols from the "alphabet"  $\{0,1\}$ . The output symbol is singularly determined by the input symbols which existed  $\tau$  seconds ago. A neuron may be considered as a finite automaton with only two possible states. Neurons may be combined into networks without the use of symbol converters (see Part I). Relay systems may also be considered as finite automata of the "neuron network" type, the time delay of  $\tau$  sec being determined by the duration of the relay operation. Concluding remarks are made on the possibility of considering a system designed as to belong to the class of finite automata. The application of the theory of finite automata is terminated as soon as equations of type (6), Part I, are written. These equations are then used as a basis for engineering design. There are 5 figures; and 1 table.

SUBMITTED:

November 26, 1959

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ROSNER, Witold, prof. mgr inz.

Dedusting boiler flue gases. Pt. 2. Gosp paliw 12 no.7:230-234  
Jl '64.

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<p>bc</p> <p style="text-align: right;">R-TH-1</p> <p>Decomposition of crude phosphates by pent and the influence of neutral salts on this process. S. N. MOSCOW (J. Leningr.-Wiss. Moscow, 1938, 3, 751; Biol. Zentr., 1939, 59, 12). The percentage decomposition of rock phosphates by pent increases with the proportion of pent to phosphate used. Gypsum and calcium and potassium chlorides have no influence on this decomposition. A. G. POLLARD.</p>																			
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
FROM DIVISION										TO DIVISION									
SECTION										SECTION									
SUBSECTION										SUBSECTION									

ROSOSINSKI, S.

"Zbiór zadań z mechaniki technicznej" (Collection of tasks on technical mechanics), by S. Rososinski. Reported in New Books (Nowe Książki), No. 15, August 1, 1955

RGSO30CHACKI, Z.

Principles of operating radar equipment. (To be contd.) p. 22.  
Increasing fruitfulness, main task of sugar-beet growers; report  
by Zigmunds Klidzins, Chairman of the Rainis Collective Farm  
in the district of Bauska. p. 29. RADIOAMATOR, Warszawa.  
Vol. 5, no. 3, Mar. 1955.

SOURCE:

East European Accession List (EEAL) Library of Congress  
Vol. 5, no. 8, August 1956.

RUSSIAN  
ROSOSKII, K.A.

2  
8

Rososkii, K. A. On the distribution of functions.  
Izv. Akad. Nauk SSSR. Ser. Mat. 13, 315-328  
(1949). (Russian)

The author proves that if  $\log \log D \leq \psi(D) \leq \log D$ ,  
then the number of  $L$ -series formed with characters mod  $D$ ,  
which have at least one zero in the rectangle

$$1 - \psi(D)/\log(D(|T|+2)) \leq \sigma \leq 1, \\ |1-T| \leq K \log^2(D(|T|+2))$$

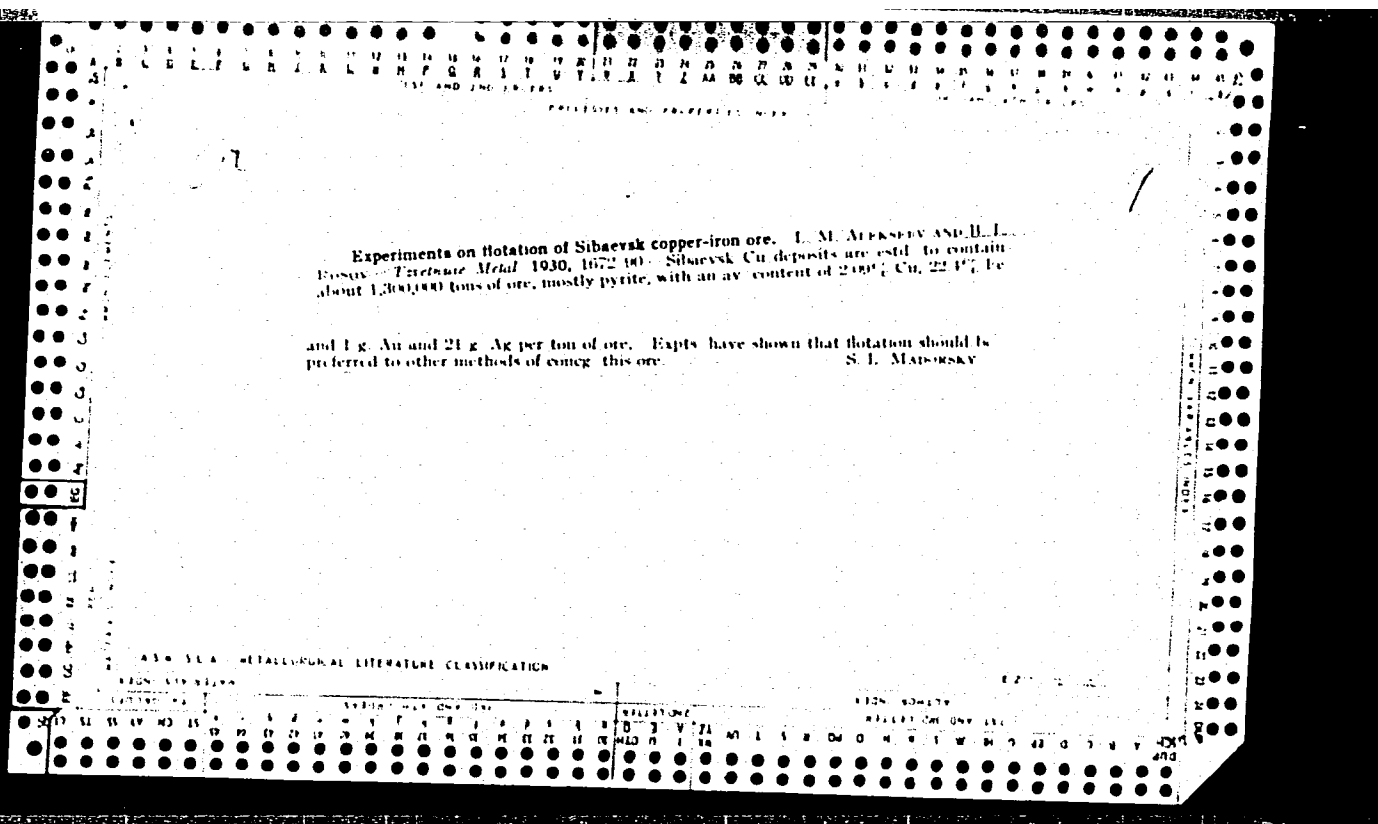
does not exceed  $B e^{A \psi(D)} \log^2(D(|T|+2))$ , where  $A, B, K$   
are absolute constants. This is a slight improvement on a  
previous result by the author [same Izvestiya Ser. Mat. 12,  
47-56 (1948); these Rev. 9, 413]. From this he derives the  
theorem about the distribution of primes in an arithmetical  
progression in the following form (using the conventional  
notation):

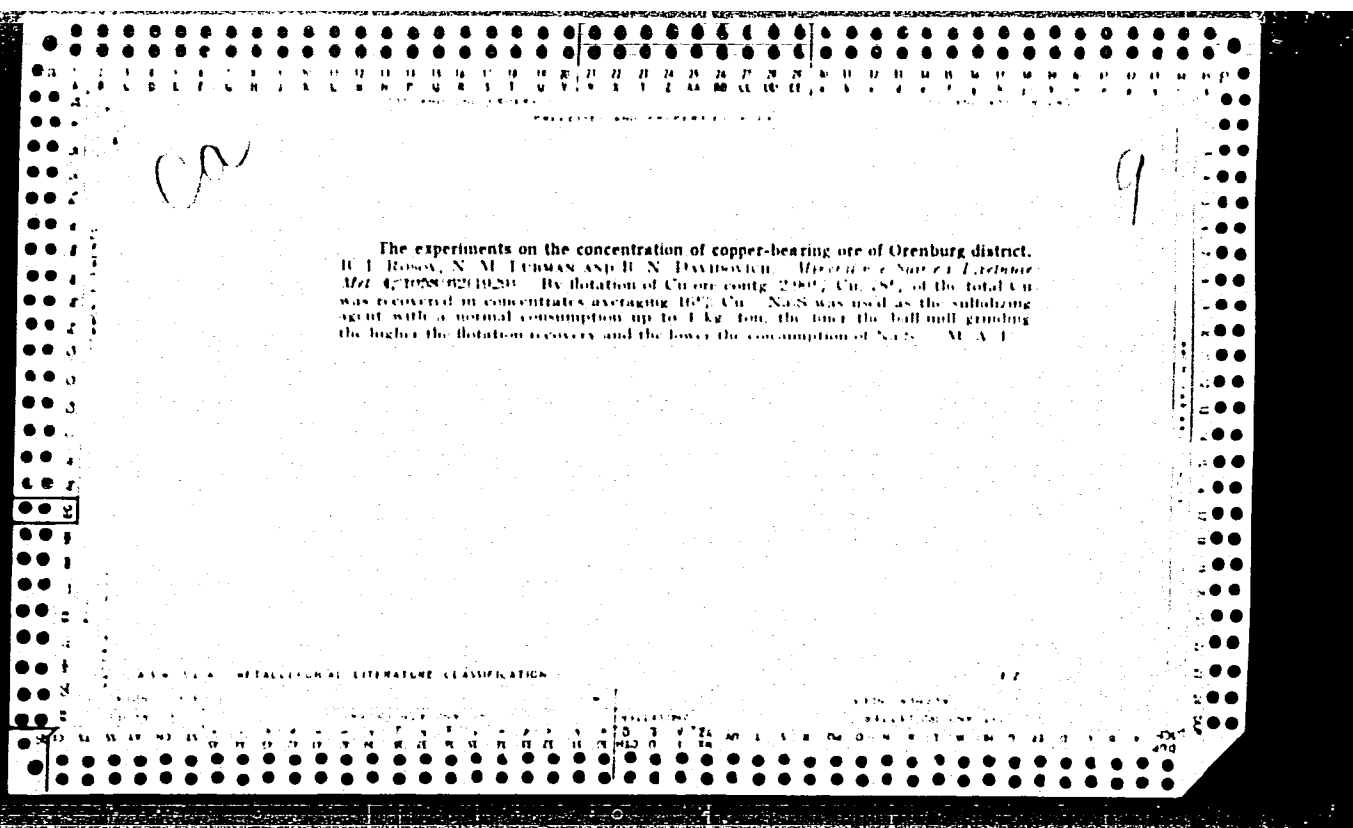
$\varphi(D)\psi(x; D, l) = x - E\chi(\rho)x^\beta \beta^{-1} + o(\exp(-A_1 \log x/\log D))$   
uniformly in  $D$  and  $l$  for  $A_1 \log D \log \log D \leq \log x \leq A_2 \log^2 D$ .  
Here  $\beta$  is the largest positive zero of all the  $L(s, \chi)$ ,  $\chi$  the  
corresponding character mod  $D$ , and  $E=1$  or 0 if such a  
zero exists or does not exist. This again is a slight improve-  
ment on a previous result by the author [same Izvestiya  
Ser. Mat. 12, 123-128 (1948); these Rev. 9, 499].

H. Heilbrunn (Bristol).

Source: Mathematical Reviews, 1950 Vol 11 No. 2

Sm  
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Flotation of scheelite from ores of Tyrnyaus deposits  
B. I. Rosov and G. A. Miasnikova. *Usenyje Metal*  
1940, No. 4: 33-41. - Flotation tests were made on pure  
minerals and on ores from Tyrnyaus deposits which con-  
tain scheelite, calcite, fluorite, wollastonite and feldspars.  
Expts. showed that the scheelite concentrate is contami-  
nated with calcite-bearing minerals. This contamination  
was prevented by the use of the following methods: (a)  
use of large quantities of liquid glass, (b) use of small quan-  
tities of oleic acid and (c) alk. medium during flotation.  
With the use of liquid glass, green or liquid soap can be

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ASU-SLA METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS		COMMON VARIABLE MOI	
<p><i>bc</i></p> <p><i>B III</i></p> <p>Solomets-like processes during (soil) amelioration. L. P. Rozov (Trans. 9th Internat. Soc. Soil Sci. (Russ. Sect.), 1932, A, 30-60). During the leaching of solonchak soils processes resembling those of solonchak formation (e.g., accumulation of adsorbed Na, increased <math>pH</math> and dispersion, dissolution of humus, and partial decomp. of the adsorbing complex) occur in the early stages. With further leaching there is a gradual displacement of adsorbed Na by Ca from soil carbonates. The presence of <math>CaSO_4</math> diminishes the intensity of the solonchak-like changes. In saline soils <math>Na_2SO_4</math> is more injurious than <math>NaCl</math> to plants when <math>CaSO_4</math> is absent, but less injurious in its presence. Characteristics of solonchak soils are not necessarily dependent entirely on the amount of adsorbed Na which they contain. In some cases the B-horizon, although originally formed through the agency of Na, has had much Na replaced by Ca and Mg; in others the clayey illuvial horizon may be formed without the participation of adsorbed Na. The general effect of irrigation on these soils is examined and discussed.</p> <p>A. G. P.</p>			
ASR-31A METALLURGICAL LITERATURE CLASSIFICATION			
SUBJECT INDEX		SUBJECT INDEX	
SUBJECT INDEX		SUBJECT INDEX	

\*The Influence of Impurities on the Corrosion-Resistance of Commercial Magnesium. M. ROBOV (*Novosti Tekhniki* (Tech. News), 1937, (23), 4; *Chem. Zentr.*, 1938, 108, (11), 3737).—[In Russian.] The corrosion-resistance of magnesium is very much reduced in the presence of chlorides. Their influence can be eliminated, however, by melting and casting in a neutral atmosphere or *in vacuo*. As alkali metals do not form solid solutions with magnesium, they are likely to be distributed in the form of very fine drops in magnesium, rendering it very prone to atmospheric corrosion. With silicon the compound  $Mg_2Si$  is formed, which is deposited in the grain boundaries and thus forms local cells with magnesium. The reducing effect of calcium on liquid magnesium is important: in order to decrease the oxidation of magnesium, up to 1% calcium is added to the melt. This addition has no deleterious effect on the corrosion-resistance.—D. R. S.

CIA-RDP86-00513R0014454

ROSSOV, M. T.

✓ Kinetics of synthesis of ammonia in the absence of diffusional retardation. A. N. Gerasenkova, M. T. Rossov, and O. A. Strel'tsov (Dokl. Akad. Nauk SSSR, 1954, v. 1013-1018).—The logarithm of the rate constant  $K$  for the synthesis of  $\text{NH}_3$  on Armaco iron, oxidized with steam at 450–470° to  $\text{Fe}_2\text{O}_3$ , and then immersed in  $\text{Al}(\text{NO}_3)_3$  solution and dried, are inversely proportional to  $1/T$ , indicating an energy of activation of  $59.0 \pm 1.0$  kg.-cal./mole, somewhat greater than that obtained on porous catalysts (40–45 kg.-cal.). The constancy of the values of  $K$  over a wide range of  $\text{NH}_3$  flow rates suggests that Temkin and Pyzhova's (1939) kinetic equation scheme described the process under these non-diffusional conditions. R. C. MURRAY.

ROSOV, H. H.

"Conditions of Soil Formation and Soild of Asia Minor," Pedology, No. 9, 1944.

ROSOV, Serafim, Vasil'yevich, kandidat tekhnicheskikh nauk, dotsent;  
SERDYUK, V.K., inzhener, redaktor; RUDENSKIY, Ya.V., tekhnicheskii redaktor.

[Course in mechanical drawing] Kurs chercheniia. Izd. 4-oe,  
isp. Kiev, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1956.  
306 p. (Mechanical drawing) (MLRA 9:5)

**The Electrolytic Refining of Tin in Sulphuric Acid Solutions.** S. A. Pletenov and V. S. Lomov (*Zetseleg Metallurgy (Non-Ferrous Metals)*, 1936, (9), 79-85).—[In Russian.] Tin of not less than 99.9% purity can be obtained by electrolyzing solutions containing about 2% impurities. Benzenesulphonic acid and glue are added to the acid solution of stannous sulphate, and the electrolysis is carried out at 35° C., with a current density of 100 amp. m.<sup>2</sup>. The tin anodes become passive in the course of electrolysis, on account of deposition of a solid salt film from the saturated anodic solution. This film can be removed by mechanical cleaning.—N. A.

AS 8.32.4 - ETALLOGICAL LITERATURE CLASSIFICATION

**CIA-RDP86-00513R0014454**



ROSOV, V. V. (Eng.)

"Über die Berechnung der auf der Bahn eines Lichtstrahls Befindlichen Luftmasse."

Zeitschrift für Meteorologie, No. 7, July 1957.

Maritime School in Murmansk